L11 ANSWER 1 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:1431771 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 148:105767
TITLE: Hexakis (3,6-anhydro)-tetrakis [2I,II,IV,V-O-(2-ethoxyethyl)] derivatives of (3,6-anhydro)-α-cyclodextrin exhibits novel cation affinities and tensioactive properties on membranes
AUTHOR(S): Debouzy, J. C.; Crouzier, D.; Gadelle, A.
CORPORATE SOURCE: Biophysics Laboratory, Centre de recherches du service de sante des armees, La Tronche, Fr.
SOURCE: Pharmazie (2007), 62(12), 892-899
CODEN: PHARAT; ISSN: 0031-7144
PUBLISHER: Govi-Verlag Pharmazeutischer Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The synthesis of hexakis (3,6-anhydro)-tetrakis[2I,II,IV,V-O-(2-ethoxyethyl)] cyclomaltohexaose (AEOE) was designed to obtain cation complexing properties. 1H NMR study showed ionic radius dependence of AEOE cation affinity, markedly observed for Cs+ and Rb+. Besides, AEOE was found hemolytic (HC50 = 9mM) and superficial tension measurements revealed pos. tensioactive properties. A 31P and 2HNMR study of phospholipid dispersions (dimyristoyl phosphatidyl choline, DMPC) in the presence of AEOE was performed; it was found that, beside the typical lineshape of phospholipid bilayers, two new NMR lines were detected in the presence of AEOE: (a) an isotropic line consistent with a detergent effect (b) another isotropic resonance of 1 Hz linewidth over phase transition temperature (298 K), indicating a true solubilization. Coupling constant measurements confirmed that the main conformation at the polar head group level was close to that observed in chloroform/methanol solution It was finally concluded that AEOE could form true solns. of DMPC, similarly to those induced by di-Et ether interactions with membranes, while giving soluble complexes.
REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:1220778 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 148:61498
TITLE: Physicochemical properties and membrane interactions of per(6-desoxy-6-halogenated) cyclodextrins
AUTHOR(S): Debouzy, J.-C.; Crouzier, D.; Gadelle, A.
CORPORATE SOURCE: Unite de Biophysique, Centre de Recherches du Service de Sante des Armees, La Tronche, F 38702, Fr.
SOURCE: Annales Pharmaceutiques Francaises (2007), 65(5), 331-341
CODEN: APFRAD; ISSN: 0003-4509
PUBLISHER: Elsevier Masson SAS
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Per(6-iodo-6-desoxy) cyclodextrins are synthesis intermediates used in the design of the cation chelating per(3,6-anhydro) cyclodextrins. The modifications of the properties of these mols. resulting from the nature of the halogen substituent and also the number of osidic building blocks were investigated by varying both factors, using 1H and 31P-NMR and EPR spectroscopies. These nearly water insol. mols. exhibits no complexing properties (for both ionic and apolar structures) but can be partially solubilized in micelles of detergent (SDS) and also in phospholipid vesicles. Dipolar connectivity (nOesy) NMR expts. show that they are embedded at the chain level of the micelles/vesicles, without any inclusion complex formation. Changing the number of glucose building blocks (6,7 or 8) or/and the nature of the halogen nuclei at the positions 6 strongly modify cyclodextrin affinities and membrane interactions. For instance the per(6-bromo-6-desoxy)-cyclomaltohexaose (ABR) and -cyclomalto-heptaose (BBR) exhibit a selective affinity for cobalt (apparent Ka of 2500 and 790 M-1, resp.). In terms of interactions with membranes, α derivs. induce sterical hindrance at the phosphorus level while destructuring the chains. Other derivs. are located deeper and rigidify the most superficial part of the chain, suppressing the jump in membrane fluidity at transition temperature
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 3 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:40820 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 145:152364
TITLE: Cation complexing 2-O-alkylated, 3,6-anhydro-α-cyclodextrins: the side-chain length governs physicochemical properties and practical applications
AUTHOR(S): Pailler, J. Y.; Gadelle, A.; Fauvelle, F.; Dabouis, V.; Crouzier, D.; Debouzy, J. C.
CORPORATE SOURCE: Unite de Biophysique, CRSSA, La Tronche, 38702, Fr.
SOURCE: Journal of Drug Delivery Science and Technology (2005), 15(6), 419-426
CODEN: JDDSAL; ISSN: 1773-2247
PUBLISHER: Editions de Sante
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A series of chain-grafted per-3,6-anhydro-α- cyclodextrins (ACD) were synthesized and their cation complexing properties studied by 1H-NMR spectroscopy. Superficial tension measurements, 1H-NMR spectroscopy and phase diagrams showed that the properties of ACD were closely related to LogP, which also controlled their interactions with membranes. As a result, practical applications could be proposed and further perspectives suggested. Hence direct decontamination in liqs. may be possible for most amphiphilic derivs., since these amphiphilic mols. form gels or soaps. The most hydrophobic derivative realizes an insol. complex that can be used for depollution or cation determination in liqs.
REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 4 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:548189 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 144:94042
TITLE: Hexakis (3,6-anhydro) tetrakis (2A,B,D,E-O-butyl) cyclomalto hexaose as a promising biological cation cryptant: Complexation and NMR study of interaction with membranes
AUTHOR(S): Pailler, J.-Y.; Gadelle, A.; Debouzy, J.-C.
CORPORATE SOURCE: CRSSA, Unite de Biophysique, La Tronche, 38702, Fr.
SOURCE: Journal of Drug Delivery Science and Technology (2005), 15(3), 237-244
CODEN: JDDSAL
PUBLISHER: Editions de Sante
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Per anhydro α- cyclodextrin exhibits in vivo and in vitro cation complexation properties, especially for heavy metal cations. In order to enhance the selectivity for toxic cations, several alkyl derivs. were prepared by substitution at the C-2 position. Among the series of 3,6-anhydro-α- cyclodextrin derivs. (from hexakis (3,6-anhydro) hexakis (2A,B,C,D,E,F-O-methyl) cyclomaltohexaose (M36) to hexakis (3,6-anhydro) tetrakis (2A,B,D,E-O-octyl) cyclomaltohexaose (O36) alkyl derivs.), hexakis (3,6-anhydro) tetrakis (2A,B,D,E-O-butyl) cyclomaltohexaose (B36) was found to be of special interest. The properties of B36 in aqueous solution and in the presence of synthetic membranes were studied by mass spectroscopy, 31P, 2H and 1H-NMR spectroscopy, by surface plasmon resonance using BIAcore, and via superficial pressure measurements. It was found that B36 exhibits a special affinity for lead compared to other heavy toxic cations (mercury, cadmium, uranyl), but a negligible affinity for physiol. cations (sodium, calcium, potassium), i.e., a great selectivity. The surface-active properties of the soapy B36 solution in water (with DMSO < 5%) were determined by surface tension measurements. In terms of solubility, B36 is very soluble in methanol (30 mM), less in ethanol (2 mM), while poorly soluble in water (500 μM). However, the use of a ternary solvent system (methanol, ethanol, water) allowed the formation of a true gel. This, related with its amphiphilic properties and possibilities for peculiar interactions with membranes are shown by 31P and 2H-NMR spectroscopic studies.
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:510596 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 144:89979

TITLE: High-resolution solid-state 13C NMR study of per(3,6-anhydro)-α- cyclodextrin based polymers and of their chromium complexes
AUTHOR(S): Cadars, Sylvian; Foray, Marie-Francoise; Gadelle, Andree; Gerbaud, Guillaume; Bardet, Michel
CORPORATE SOURCE: Service de Chimie Inorganique et Biologique, Departement de Recherche Fondamentale sur la Matiere Condensee, CEA-Grenoble, Grenoble, F-38054, Fr.
SOURCE: Carbohydrate Polymers (2005), 61(1), 88-94
CODEN: CAPOD8; ISSN: 0144-8617
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB High-resolution solid-state 13C NMR was employed to characterize polymers made of per-3,6-anhydro-α- cyclodextrins with 1,6-diisocyanatohexane used to bridge the macrocycles. These materials were designed because of their insoly. and their extractant properties due to the presence of the cyclodextrin rings. The properties of this new type of material appear very promising as potential extractant of different oxoanions. The properties of these materials to bind chromate or dichromate ions appear to be particularly attractive since the extraction of chromium is high and moreover there is no degradation of the polymers that can be further regenerated. These features rely mostly on qual. and quant. analyses of CP/MAS spectra. The studies of the NMR relaxation times, TCH, T1pH and T1C for the starting polymers and its metal complexes allowed obtaining valuable insights concerning the mol. sites of interactions of the polymers with the oxoanions.
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 6 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:78816 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 142:328220
TITLE: Inclusion complexes of trivalent lutetium cations with an acidic derivative of per(3,6-anhydro)-α- cyclodextrin
AUTHOR(S): Bonnet, Celia; Gadelle, Andree; Pecaut, Jacques; Fries, Pascal H.; Delangle, Pascale
CORPORATE SOURCE: Laboratoire de Reconnaissance Ionique, SCIB, CEA/DSM/DRFMC, CEA-Grenoble, Grenoble, 38 054, Fr.
SOURCE: Chemical Communications (Cambridge, United Kingdom) (2005), (5), 625-627
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The cyclodextrin derivative (hexakis(2-O-carboxymethyl-3,6-anhydro)-α- cyclodextrin (H6ACX)) forms mono- and bimetallic complexes with Lu(III) in aqueous solution The x-ray structure of binuclear [Lu2(ACX)(H2O)2] is the 1st example of a lanthanide-cyclodextrin inclusion complex. The stability consts. of Lu-H6ACX complexes were determined
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 7 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:83689 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 141:255627
TITLE: Hydrolytic properties of per (3,6-anhydro, 2-O-carboxymethyl) alpha cyclodextrin complexes of Ce (III) and Eu (III): application to soman (GD) degradation
AUTHOR(S): Debouzy, J. C.; Gadelle, A.; Fauvelle, F.; Testylier, G.
CORPORATE SOURCE: CRSSA, La Tronche, Fr.
SOURCE: Bollettino Chimico Farmaceutico (2003), 142(3), 105-108
CODEN: BCFAAI; ISSN: 0006-6648
PUBLISHER: Societa Editoriale Farmaceutica
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Per (3,6-anhydro-2-O-carboxymethyle) α- cyclodextrin ([ACX]) is a polydentate analog of EDTA a well-known cation chelating

reagent. ACX exhibits strong affinities in vitro for uranyl, cobalt and also for lanthanides such as Europium and Cerium. The hydrolytic activities of ACX-Eu and ACX-Ce complex were directly tested on an organophosphorous compound: the neurotoxic Soman (GD), an inhibitor of acetylcholinesterase (ACHE from rat brain). It was found a three fold reduction of soman activity when measured in the presence of Ce-ACX complex. Conversely, Eu-ACX effect did not result in soman inhibition variation under physiol. conditions. It is suggested that, considering usual organometallic complex of cyclodextrin, such direct complexes would be of interest in the design of pseudo-enzyme systems for phosphoester hydrolysis.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:990981 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 140:52345
TITLE: Per(3,6-anhydro)cyclodextrin derivatives, their preparation, and their use for the separation or fixation of anions based on manganese and chromium
INVENTOR(S): Gadelle, Andree
PATENT ASSIGNEE(S): Commissariat A L'energie Atomique, Fr.; Centre National De La Recherche Scientifique Cnrs
SOURCE: Fr. Demande, 42 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2840906	A1	20031219	FR 2002-7205	20020612
FR 2840906	B1	20040716		
WO 2003106507	A1	20031224	WO 2003-FR1741	20030611
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003250357	A1	20031231	AU 2003-250357	20030611
EP 1511774	A1	20050309	EP 2003-760007	20030611
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005534729	T	20051117	JP 2004-513337	20030611
US 2006014722	A1	20060119	US 2005-517582	20050801

PRIORITY APPLN. INFO.: FR 2002-7205 A 20020612
WO 2003-FR1741 W 20030611

OTHER SOURCE(S): MARPAT 140:52345

AB Derivs. of per(3,6-anhydro) cyclodextrins having the general formulas (I) and (II) are prepared which can be used for the separation or fixation of chromate, dichromate and/or manganate anions from water or as a pharmaceutical complexing agent for humans. R1 in the general formulas I and II represents -OCONHR2, OH, OR3, SH, SR3, OCOR3, NH2, NHR3, NR3R4, CONH2, CONR3R4, CN, COOR3, OCH2COOH, or COOH, R3 and R2 represent an aliphatic, saturated or unsatd. group, R3 and R4 represent an aliphatic or aromatic hydrocarbon group which can be saturated or unsatd. and which can be substituted by halogen atoms or hetero atoms, such as O, S, and N, and n is 6, 7, or 8, or R1 represents the group OCONH(CR5R6)mNHCOOR7 with R5 and R6 being aliphatic saturated or unsatd. groups, and R7 represents glucosidic or maltosidic units of peranhydrocyclodextrin and m is a number from 1 to 20. Preferably, R1 of the per(3,6-anhydro) cyclodextrin derivative is -OCONHR2 with R2 being an Et or hexyl group and n being 6. The per(3,6-anhydro) cyclodextrin derivs. are prepared by reacting per(3, 6-anhydro) cyclodextrins having the general formulas (III) and (IV) with an isocyanate OCN-R2 or a diisocyanate OCN(CR5R6)mNCO. Polymers are obtained by reacting at least two per(3,6-anhydro)

cyclodextrin derivs. having the general formulas III and IV with n and m being 6 and R5 and R6 being H. For the removal of anions from water the per(3,6-anhydro) cyclodextrin derivative or polymer is dissolved in an organic solvent immiscible with water.
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 9 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:940046 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 141:16917
TITLE: In vitro cellular toxicity and in vitro lethality studies of alkylated α-anhydro cyclodextrins
AUTHOR(S): Debouzy, J. S.; Gadelle, A.; Pailler, J. Y.; Fusai, T.; Dabouis, V.; Pradines, B.; Fauvelle, F.; Crouzier, D.
CORPORATE SOURCE: CRSSA/BCM et Service d'Imagerie, La Tronche, 38702, Fr.
SOURCE: STP Pharma Sciences (2003), 13(3), 209-214
CODEN: STSSE5; ISSN: 1157-1489
PUBLISHER: Editions de Sante
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The overall toxicity of several per(3, 6-anhydro)-α-cyclodextrins was studied both in vivo, in mice (mortality), and in vitro, in cells (VERO and CHO strains) and erythrocytes (hemolytic activity). It was found that mortality increased with the chain length, thus ranging from 0% (35 mM, saturated solution of per(3,6-anhydro)-α-cyclodextrin, A36) to a LD50 of 45-48 mM (per(2-O-methyl), M36)), and to 30% death at 10 mM (saturated per(2-O-Et, E36). A similar dependence of hemolytic activity on the chain length was also found, with the lowest HD50 observed for E36 and a negligible hemolysis observed for A36 and M36. Furthermore, cell toxicities observed on VERO and CHO cell cultures provided quite similar results. Finally, E36 was the only derivative able to interfere with the cell adhesiveness in plasmodium infected cells. It was suggested that the tensioactive properties of E36 are related both with this activity and with the overall toxicity of these derivs. Other chemical modifications were proposed to enhance the security range between toxicity and anti-adhesive activity.
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 10 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:102935 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 139:129243
TITLE: In vitro uranyl affinity of per(3,6-anhydro-2-o-carboxymethyl)-α- cyclodextrin and conditions required for in vivo application
AUTHOR(S): Debouzy, J. C.; Gadelle, A.; Tymen, H.; Le Gall, B.; Millot, X.; Moretto, P.; Fauvelle, F.; Le Peoc'H, M.; Dabouis, V.; Martel, B.
CORPORATE SOURCE: UMR 5046, CEA/DRFMC/SCIB/FI, Grenoble, F38054, Fr.
SOURCE: Annales Pharmaceutiques Francaises (2003), 61(1), 62-69
CODEN: APFRAD; ISSN: 0003-4509
PUBLISHER: Masson Editeur
DOCUMENT TYPE: Journal
LANGUAGE: French
AB Per(3.6-anhydro-2-O-carboxymethyle)-α- cyclodextrin ([I]) is a polydentate analog of EDTA, a well-known cation chelating reagent. I exhibits strong affinities in vitro for lanthanides, cobalt and also for uranyl cations. A 1:1 stoichiometry and a high affinity for uranyl (6<logK<7) were found in vitro. I is not hemolytic and exhibits no lethal properties in mice (LD50 42 mM). In vivo injection at supralethal amts. of uranyl complex of I prevents immediate death in mice, while it is unable to protect against later death. Pharmacokinetic studies show that a dissociation of the complex occurs, leading to the release of free uranyl. Complexation assays of I, Co nitrate and Pb nitrate, using cyclodextrin-functionalized polyester fabrics were also carried out.
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 11 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:68010 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 138:211797
TITLE: First evaluation of per(3,6-anhydro,2-O-carboxymethyl)-α- cyclodextrin for biological decontamination of cobalt
AUTHOR(S): Debouzy, J. C.; Tymen, H.; Le Gall, B.; Fauvelle, F.; Martel, B.; Gadelle, T.; Gadelle, A.
CORPORATE SOURCE: Unite de Biophysique et Service de Biospectrometrie, CRSSA, La Tronche, 38702, Fr.
SOURCE: S.T.P. Pharma Sciences (2002), 12(6), 397-402
CODEN: STSSE5; ISSN: 1157-1489
PUBLISHER: Editions de Sante
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Per (3,6-anhydro-2-O-carboxymethyl)-α- cyclodextrin (ACX) is a polydentate analog of EDTA, a known cation chelating reagent. ACX exhibits strong affinities in vitro for lanthanids, uranyle and especially for Co. The possible application of ACX for Co decontamination was tested in an aqueous solution and incorporated in agarose gel on human skin (in Franz's diffusion chambers) and living rats. In comparison with EDTA and DTPA, skin decontamination by ACX was better when it was incorporated in a gel and similar after several skin washing cycles. Several ACX-loaded tissues (viscose and polyester) were also assayed on the same model and showed an increased fixation of Co by ACX-loaded viscose, whereas this was not observed with polyester.
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 12 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:923095 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 139:138695
TITLE: Amphiphilic per(3,6-anhydro, 2-O-ethyl)-α-cyclodextrin: the first step towards self-gelifying cation cryptants?
AUTHOR(S): Debouzy, J. C.; Gadelle, A.; Fauvelle, F.; Pailler, J. Y.; Brasme, B.; Dabouis, V.; Aous, S.; Fusai, T.
CORPORATE SOURCE: Unite de Biophysique et Service de Biospectrometrie, CRSSA, La Tronche, 38702, Fr.
SOURCE: S.T.P. Pharma Sciences (2002), 12(5), 267-273
CODEN: STSSE5; ISSN: 1157-1489
PUBLISHER: Editions de Sante
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The properties of per(3,6-anhydro, 2-O-ethyl)-α- cyclodextrin (3,6-CDE) in solution and in the presence of synthetic membranes were studied by thin layer chromatog., mass, 31P-, 2H- and 1H-NMR spectroscopies, and superficial pressure measurements. It was found that 3,6-CDE exhibits a good affinity for Co2+, Hg2+, Sr2+, Pb2+ and Na+. Besides, ROESY expts. showed that two different conformations of 3,6-CDE were simultaneously present during slow exchange. The tensioactive properties of the soapy solution of 3,6-CDE in water/ethanol were shown by superficial tension (ST) measurements. Moreover, 31P-NMR showed an increase of the superficial fluidity of phospholipid dispersions, above the transition temperature in the presence of 3,6-CDE. Furthermore, no detergent effect was observed in the presence of small unilamellar vesicles of lecithin, membrane destructions being only observed after several days, or when 3,6-CDE and phospholipids were co-sonicated. These results lead to the discussion of the biol. availability of 3,6-CDE as a wound decontaminant, further chemical modifications being also suggested.
REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 13 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:514937 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 137:52362
TITLE: Biocompatible gels comprising peranhydrodextrins useful for decontaminating wounds contaminated by heavy metals such as lead
INVENTOR(S): Baudin, Cecile; Perly, Denis; Gadelle, Andree

; Debouzy, Jean Claude; Fauvelle, Florence
PATENT ASSIGNEE(S): Commissariat a l'Energie Atomique, Fr.
SOURCE: Fr. Demande, 14 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2814748	A1	20020405	FR 2000-12429	20000929
PRIORITY APPLN. INFO.:			FR 2000-12429	20000929

OTHER SOURCE(S): MARPAT 137:52362
AB Biocompatible gels comprising peranhydrodextrins, a gelling agent, and water are useful for decontaminating wounds contaminated by heavy metals such as lead. A gel contained permethyl-perhydro-α-cyclodextrin 20, agarose 3 g/L.

L11 ANSWER 14 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:484484 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 137:353231
TITLE: Acidic Derivative of Per(3,6-anhydro)-α-cyclodextrin: Preparation and a First Evaluation of Its Affinity for Lanthanides by 1H NMR
AUTHOR(S): Fauvelle, F.; Gadelle, A.; Pailler, Y.; Aous, S.; Debouzy, J. C.
CORPORATE SOURCE: Laboratoire de Biophysique, CRSSA, La Tronche, 38702, Fr.
SOURCE: Journal of Inclusion Phenomena and Macrocyclic Chemistry (2002), 42(3-4), 203-207
CODEN: JIPCF5; ISSN: 1388-3127
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:353231
AB We report on the first synthesis of hexakis(2-O-carboxymethyl-3,6-anhydro)-α- cyclodextrin, an acidic derivative of per(3,6-anhydro)-α- cyclodextrin. Preliminary qual. tests showed that this new compound would have greater affinity for lanthanides, cobalt and uranyl cations, than for sodium, potassium and calcium physiol. ions.
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 15 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:730839 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 135:290396
TITLE: Per(3,6-anhydro)cyclodextrin derivatives, preparation and use thereof for separating ions
INVENTOR(S): Gadelle, Andree; Fauvelle, Florence; Debouzy, Jean-Claude
PATENT ASSIGNEE(S): Commissariat a l'Energie Atomique, Fr.; Centre National de la Recherche Scientifique (CNRS)
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001072849	A1	20011004	WO 2001-FR923	20010327
W: US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
FR 2807044	A1	20011005	FR 2000-3899	20000328
FR 2807044	B1	20020503		
EP 1187854	A1	20020320	EP 2001-919576	20010327
EP 1187854	B1	20041110		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

AT 282048	T	20041115	AT 2001-919576		20010327
ES 2231469	T3	20050516	ES 2001-919576		20010327
US 2002137923	A1	20020926	US 2001-926637		20011128
US 6559135	B2	20030506			
PRIORITY APPLN. INFO.:			FR 2000-3899	A	20000328
			WO 2001-FR923	W	20010327

OTHER SOURCE(S): MARPAT 135:290396

AB The invention concerns per(3,6-anhydro)cyclodextrin derivs., their preparation and their use for separating polluting ions, for example, for human decontamination. The derivs. bear axially or equatorially substituted group R1 on positions 2 where one R1 at least represents the -OCH2COOH group and the other R1's, identical or different, correspond to one of the formulas: OH, OR2, SH, SR2, OCOR2, NH2, NHR2, NR2R3, CONH2, CONHR2, CONR2R3, CN, COOR2, COOH and R2, wherein: R2 and R3, identical or different, represent a saturated or unsatd. hydrocarbon, aliphatic or aromatic group, capable of comprising one several heteroatoms selected among O, S and N; and n is equal to 6, 7 or 8. Thus, heating 1 g hexakis(3,6-anhydro)cyclomaltohexaose for 2 h at 120°, adding 10 mL DMSO and 10 mL a 2N NaH DMSO solution, mixing under Ar for 3 h at room temperature, combining the resulting blue-gray solution with 1.6 g Na monochloroacetate, mixing at room temperature for 24 h and working up gave a hexakis(3,6-anhydro-2-O-carboxymethyl)cyclomaltohexaose which formed easily complexes with aqueous solution containing Lu3+, La3+, Dy3+, Eu3+ and Co2+ ions.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 16 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:341369 CAPLUS <<LOGINID::20080328>>

DOCUMENT NUMBER: 135:348375

TITLE: 1H-NMR study of heavy metals complexation with hexakis(3,6-anhydro)tetrakis(2A,B,D,E-O-octyl)cyclomaltohexaose (oct)

AUTHOR(S): Debouzy, J. C.; Gadelle, A.; Fauvelle, F.; Nardin, R.; Aous, S.; Lhoste, F.; Pailler, Y.

CORPORATE SOURCE: CRSSA, Biological and molecular biophysics Lab., La Tronche, Fr.

SOURCE: Bollettino Chimico Farmaceutico (2001), 140(1), 9-14
CODEN: BCFAAI; ISSN: 0006-6648

PUBLISHER: Societa Editoriale Farmaceutica

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The selection of cations bound by hexakis(3,6-anhydro)tetrakis (2A,B,D,E-O-octyl)cyclomaltohexaose (OCT) was performed by thin layer chromatog. The 3 cations selected, UO22+, Pb2+ and Hg2+, were then studied by 1H-NMR. A 2:1 OCT/cation stoichiometry was identified in the cases of UO22+ and Pb2+. While UO22+ binding (log K around 6) followed a fast exchange kinetics, a slow or intermediate complexation was observed with Pb2+ (log K-5.6) and Pb2+, resp. In the latter case, because of the the poor solubility of Hg2+, neither a stoichiometry nor an estimation of the affinity constant could be proposed.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 17 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:729064 CAPLUS <<LOGINID::20080328>>

DOCUMENT NUMBER: 134:17643

TITLE: 2-O-substituted-3,6-per-anhydro-α-cyclodextrin as potential biocompatible agents for the selective complexation of heavy metal ions with special attention to lead

AUTHOR(S): Baudin, Cecile; Pean, Christophe; Pellizzari, Bruno; Gadelle, Andree; Fauvelle, Florence; Debouzy, Jean-Claude; Dalbiez, Jean-Pierre; Perly, Bruno

CORPORATE SOURCE: CEA, DRECAM/SCM, CEN de Saclay, Gif sur Yvette, F-91191, Fr.

SOURCE: Journal of Inclusion Phenomena and Macrocyclic Chemistry (2000), 38(1-4), 287-296
CODEN: JIPCF5

PUBLISHER: Kluwer Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We report on the synthesis, characterization and ionic complexation

properties of hexakis (2-O-acetyl-3,6-anhydro) cyclomaltohexaose and hexakis (2-O-methyl-3,6-anhydro) cyclomaltohexaose using thin-layer chromatog. and NMR spectroscopy. The selectivity towards cations depends on chemical modification of the hydroxyl groups and a very high specificity can be obtained in the case of lead for methylated derivs.
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 18 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:311144 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 132:339914
TITLE: Cation complexation properties of hexakis(2-O-methyl-3,6-anhydro)-α- cyclodextrin: A 1H NMR study
AUTHOR(S): Fauvelle, F.; Gadelle, A.; Debouzy, J. C.; Baudin, C.; Perly, B.
CORPORATE SOURCE: CRSSA, laboratoire de Biophysique, La Tronche, 38702, Fr.
SOURCE: Supramolecular Chemistry (2000), 11(3), 233-237
CODEN: SCHEER; ISSN: 1061-0278
PUBLISHER: Gordon & Breach Science Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The affinity of hexakis(2-O-methyl-3,6-anhydro)-α- cyclodextrin (3,6-α-CDM) for Ba2+, Pb2+, Ca2+ and Sr2+ has been tested by 1H NMR. 3,6-α-CDM forms strong complexes in water with Pb2+ and Ba2+. The comparison with the parent hexakis(3,6-anhydro)-α- cyclodextrin bearing hydroxyl groups instead of methoxy groups reveals that the O-CH3 substitution significantly improves the anhydro-cyclodextrin selectivity.
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 19 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:56447 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 132:242539
TITLE: Comparative cation chelating properties of per(3,6-anhydro)- and per(3,6-anhydro 2-O Me) α-cyclodextrins
AUTHOR(S): Debouzy, J. C.; Fauvelle, F.; Gadelle, A.; Dabouis, V.; Perrin, A.; Brasme, B.; Peinequin, A.; Perly, B.
CORPORATE SOURCE: CRSSA/Biophysics, La Tronche, 38702, Fr.
SOURCE: Proceedings of the International Symposium on Cyclodextrins, 9th, Santiago de Comostela, Spain, May 31-June 3, 1998 (1999), Meeting Date 1998, 105-108. Editor(s): Labandeira, J. J. Torres; Vila-Jato, J. L. Kluwer Academic Publishers: Dordrecht, Neth.
CODEN: 68NHAE
DOCUMENT TYPE: Conference
LANGUAGE: English
AB The cation chelating properties of per(3,6 anhydro)-α- cyclodextrin, [A36] and of per(3,6 anhydro, 2-O Me)-α- cyclodextrin, [A36M] were studied by mass and NMR spectroscopy. A36 forms 1:1 complexes with lead (K = 2500 M-1), and also with Sr and K with a fast exchange rate kinetics. However, the formation of A36-Pb complex results in a dramatic enhancement of the hemolytic properties. Permethylation at the position 2 (A36M) confers an extreme affinity for Ba2+, Pb2+, Sr2+ and Ca2+ following a slow rate exchange process and a 1:1 stoichiometry. A weak 1:1 A36M-K complex is also found with a fast exchange rate. In contrast to A36, A36M complexes showed no hemolytic properties. An agarose gel of A36M was successful in the decontamination of wounds polluted with lead or strontium ions on rats.
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 20 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:56439 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 132:222741
TITLE: Mono-6-tosyl-β- cyclodextrin: preparation, hydrolysis and self-inclusion studies in aqueous solution

AUTHOR(S): Djedaini-Pilard, F.; Gosnat, M.; Steinbruckner, S.; Dalbiez, J. P.; Crini, G.; Perly, B.; Gadelle, A.
CORPORATE SOURCE: DRECAM/SCM, CEA-Saclay, Gif sur Yvette, F-91191, Fr.
SOURCE: Proceedings of the International Symposium on Cyclodextrins, 9th, Santiago de Comostela, Spain, May 31-June 3, 1998 (1999), Meeting Date 1998, 73-76. Editor(s): Labandeira, J. J. Torres; Vila-Jato, J. L. Kluwer Academic Publishers: Dordrecht, Neth.
CODEN: 68NHAE
DOCUMENT TYPE: Conference
LANGUAGE: English
AB We show here that the kinetics of the reaction of tosylation in aqueous solution strongly depends upon the effective pH. In alkaline aqueous solution, although the reaction is very fast and can yield up to 35% of the title compound, it is competing with hydrolysis of the mono-6-tosyl-6-deoxy-β-cyclodextrin (1). A complete NMR study has demonstrated that this product is hydrolyzed in aqueous solution at pH > 6 and that acidification of the reaction medium can quench this process. Investigations of the structure of pure 1 in aqueous solution are presented showing that a strong intramol. self-inclusion complex is formed. Dedicated two dimensional NMR expts. are used in conjunction with competition with external guests to evidence and estimate the strength of the auto-inclusion complex.
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 21 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:535329 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 132:88121
TITLE: Interaction of per(3,6-anhydro)-α-cyclodextrin (α36CD) and lead-α36CD complex with biological systems
AUTHOR(S): Debouzy, J. C.; Fauvelle, F.; Gadelle, A.; Baudin, C.; Richard, M.; Perly, B.; Chouteau, F.; Joets, J.; Tazz, J. J.; Daveloose, D.
CORPORATE SOURCE: CRSSA, Laboratoire RMN, Tronche, 38702, Fr.
SOURCE: Bollettino Chimico Farmaceutico (1998), 137(5), 144-151
CODEN: BCFAAI; ISSN: 0006-6648
PUBLISHER: Societa Editoriale Farmaceutica
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The interactions of per(3,6 anhydro)-α- cyclodextrin (α36CD) and of lead-α36CD complex with biol. systems were tested by NMR, ESR and electronic microscopy using erythrocytes and model membranes. It was found that the hemolytic activity of α36CD alone was seven fold lower than that of natural α- cyclodextrin (evaluated by the concentration inducing 50% hemolysis, DH50=35 mM). Conversely, the formation of the complex resulted in an increase of hemolytic properties, with DH50 of 1 mM. The mechanism proposed was an increased membrane diffusion by endocytosis of the complex, leading to higher amts. of intracellular lead.
REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 22 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:68297 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 130:233399
TITLE: The cation complexation properties of per-3,6-anhydro-α and β-cyclodextrins studied by thin layer chromatography and 1H NMR
AUTHOR(S): Fauvelle, F.; Gadelle, A.; Debouzy, J. C.; Perly, B.
CORPORATE SOURCE: CRSSA, Biophysique, La Tronche, 38702, Fr.
SOURCE: Molecular Recognition and Inclusion, Proceedings of the International Symposium on Molecular Recognition and Inclusion, 9th, Lyon, Sept. 7-12, 1996 (1998), Meeting Date 1996, 325-328. Editor(s): Coleman, Annette W. Kluwer: Dordrecht, Neth.
CODEN: 67FSAY
DOCUMENT TYPE: Conference

LANGUAGE: English
AB A step scale affinity of cations for per-3,6-anhydro-α-cyclodextrin (3,6-αCD) can be deduced from NMR binding constant determination which is in agreement with TLC results: Pb2+ » Sr2+ > K+ > Cs+ > NH4. The other ions tested, like Na+ and Ca2+, did not induce any observable spectral modifications on the NMR time-scale. The 3,6-αCD mol. is then selective for Pb2+. Conversely, 3,6-βCD has poor cation binding properties: only K+ and Cs+ are complexed. The weakness of the binding consts. and the absence of selectivity are not in favor of a biol. use.
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 23 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:68293 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 130:233398
TITLE: NMR study of per(3,6-anhydro)-α-cyclodextrin as a potential agent for the biological decontamination of lead as evidenced by NMR spectroscopy
AUTHOR(S): Debouzy, J. C.; Fauvelle, F.; Gadelle, A.; Perly, B.; Baudin, C.
CORPORATE SOURCE: CRSSA, U.Biophysique, La Tronche, 38702, Fr.
SOURCE: Molecular Recognition and Inclusion, Proceedings of the International Symposium on Molecular Recognition and Inclusion, 9th, Lyon, Sept. 7-12, 1996 (1998), Meeting Date 1996, 309-312. Editor(s): Coleman, Annette W. Kluwer: Dordrecht, Neth.
CODEN: 67FSAY
DOCUMENT TYPE: Conference
LANGUAGE: English
AB The ability of per(3,6-anhydro)-α- cyclodextrin (A36CD) to capture lead from a preformed glutathione-lead complex was investigated by NMR spectroscopy. This strongly depends on the nature and pH of the buffer used in the competition expts. It was found that an almost complete removal of lead can be achieved at pH 5.5, especially when lead nitrate is used. The capture also strongly depends on the nature of the lead species as well as of the counter ion present in the medium. These observations imply that decontamination of lead by this process will be optimal under acidic conditions.
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 24 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:8034 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 130:71569
TITLE: Method for fixing or separating ions such as lead by using per(3,6-anhydro)cyclodextrin derivatives
INVENTOR(S): Baudin, Cecile; Perly, Bruno; Gadelle, Andree ; Debouzy, Jean-Claude; Fauvelle, Florence
PATENT ASSIGNEE(S): Commissariat a l'Energie Atomique, Fr.
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9856829	A1	19981217	WO 1998-FR1235	19980612
W: AU, HU, JP, RU, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
FR 2764525	A1	19981218	FR 1997-7339	19970613
FR 2764525	B1	19990723		
ZA 9805079	A	19990112	ZA 1998-5079	19980611
AU 9882181	A	19981230	AU 1998-82181	19980612
AU 752287	B2	20020912		
EP 991670	A1	20000412	EP 1998-932194	19980612
EP 991670	B1	20011031		

R: CH, DE, GB, IT, LI, NL, SE

HU 2000002298	A2	20001128	HU 2000-2298	19980612
HU 2000002298	A3	20030528		
JP 2002504167	T	20020205	JP 1999-501800	19980612
US 6544964	B1	20030408	US 2000-445818	20000324
PRIORITY APPLN. INFO.:			FR 1997-7339 A	19970613
			WO 1998-FR1235 W	19980612

OTHER SOURCE(S): MARPAT 130:71569

AB A method for fixing or separating ions, in particular of lead by using per(3,6-anhydro)cyclodextrin derivs. consists in contacting the medium containing the ions to be fixed or separated, with the derivative Preferably, for fixing lead hexakis(3,6-anhydro-2-O-methyl)cyclomaltohexaose (I) is used. The complexation will eliminate the environmental lead pollution. Thus, I was prepared by the methylation of hexakis(3,6-anhydro)cyclomaltohexaose with MeI in the presence of NaH in DMF solution I was then treated with Pb(NO3)2 to give the complex which was characterized by spectral methods. I is useful for the decontamination of lead.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 25 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:786657 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 128:16383
TITLE: Mechanism of α- cyclodextrin induced hemolysis. 2. A study of the factors controlling the association with serine-, ethanolamine-, and choline-phospholipids
AUTHOR(S): Debouzy, J. C.; Fauvelle, F.; Crouzy, S.; Chapron, Y.; Goschl, M.; Gadelle, A.
CORPORATE SOURCE: Unite de Biophysique, CRSSA, La Tronche, 38702, Fr.
SOURCE: Journal of Pharmaceutical Sciences (1998), 87(1), 59-66
CODEN: JPMSAE; ISSN: 0022-3549
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A NMR spectroscopy and mol. modeling study of the interaction between α- cyclodextrin (α-CD) and phospholipids with serine, ethanolamine, or choline headgroups was based on 31P and 1H NMR measurements on small unilamellar vesicles (SUV), multilamellar vesicles (MLV), and aqueous suspensions of lipids using a direct complex preparation with α-CD. Mol. dynamics computer simulations were used to investigate the trajectory of α-CD in the vicinity of a membrane surface and the influence of the charge and dipole moment of the phospholipid headgroups. These factors of charge and orientation of dipole moment seemed to play a key role in the interaction of phospholipids with α-CD and reflected very well the exptl. observed selectivity of the approach of α-CD to phospholipid. However, with this approach, there is no evidence for the formation of a complex with the phospholipid headgroup (except for phosphatidylinositol) that results from electrostatic forces. Rather, after a possible extraction of the lipid from the membrane, a classical inclusion of the sn-2 chain in the cavity of α-CD occurs. This step depends on the alkyl chain length and saturation state of the lipids as well as on their organization (i.e., as vesicles or dispersions). Possible chemical modifications of the α-CD mol. to control the hemolytic properties of α-CD are discussed.

L11 ANSWER 26 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:697961 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 127:359022
TITLE: A mild one-step selective conversion of primary hydroxyl groups into azides in mono- and oligosaccharides
AUTHOR(S): Luis Jimenez, Jose Luis; Garcia Fernandez, Jose Manuel; Gadelle, Andree; Defaye, Jacques
CORPORATE SOURCE: CSIC and Universidad de Sevilla, Instituto de Investigaciones Quimicas, Seville, E-41092, Spain
SOURCE: Carbohydrate Research (1997), 303(3), 367-372
CODEN: CRBRAT; ISSN: 0008-6215
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

OTHER SOURCE(S): CASREACT 127:359022
AB The direct azidation reaction of several monosaccharide Me glycopyranosides, sucrose, α,α-trehalose, cyclomaltohexaose and cyclomaltoheptaose with sodium azide in the presence of triphenylphosphine-carbon tetrabromide is reported. The optimal reaction conditions require pre-formation of the reactive species before addition of the sugar substrate. Formation of the primary azidodeoxy compound is accompanied by simultaneous formation of the corresponding primary bromodeoxy and 3,6-anhydro derivs. in the glycopyranoside series, the former being transformed in situ into the azide by quenching of the reaction mixture with methanol before increasing the temperature Interestingly, good selectivity towards the primary C-6 position of the glucopyranosyl moiety as compared to the fructofuranosyl one was observed in the case of sucrose, advantage of which has been taken in an improved preparation of 2,3,4,1',3',4',6'-hepta-O-acetyl-6-azido-6-deoxysucrose (45% yield from sucrose). Sodium or lithium azide reagents were found equally effective. The azide functionality could be reduced without previous purification and the resulting amino sugar isolated by cation-exchange column chromatog., as illustrated for the preparation of 61-amino-61-deoxycyclomaltoheptaose.
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 27 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:606040 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 127:257578
TITLE: The hemolytic properties of chemically modified cyclodextrins
AUTHOR(S): Bost, Mireille; Laine, Valerie; Pilard, Florence; Gadelle, Andree; Defaye, Jacques; Perly, Bruno
CORPORATE SOURCE: Laboratoire d'Hematologie, Centre Hospitalier Universitaire de Grenoble, Grenoble, F-38043, Fr.
SOURCE: Journal of Inclusion Phenomena and Molecular Recognition in Chemistry (1997), 29(1), 57-63
CODEN: JIMCEN; ISSN: 0923-0750
PUBLISHER: Kluwer
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The hemolytic properties of natural cyclodextrins, especially of the more common cyclomaltoheptaose entity, severely hamper their potential use as carriers in pharmaceutical applications where parenteral administration is concerned. A systematic investigation on the role of chemical modifications with regard to the hemolytic character was carried out involving C-6 branched neutral, anionic, cationic and amphoteric derivs. From these data, conclusions have been drawn about the charge and the geometry of the modification: (1) substitution at primary hydroxyl groups usually decreases the hemolytic character and the geometry of the substituent affects the hemolytic property; (2) introduction of an amino group, resulting in a pos. charge at physiol. pH, decreases the hemolytic character; (3) neg. charges are comparatively less effective in reducing the hemolytic character; (4) zwitterionic groups seem to enhance the hemolytic character of the cyclodextrin mol.
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 28 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:553822 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 127:190980
TITLE: Substituted derivatives of per(3,6-anhydro) cyclodextrins, process for their preparation and their uses for TLC separation of cations
INVENTOR(S): Baudin, Cecile; Perly, Bruno; Gadelle, Andree
PATENT ASSIGNEE(S): Commissariat a l'Energie Atomique, Fr.
SOURCE: Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 787744	A1	19970806	EP 1997-400197	19970128

EP 787744	B1	20010613		
R: CH, DE, GB, IT, LI, NL, SE				
FR 2744124	A1	19970801	FR 1996-1073	19960130
FR 2744124	B1	19980306		
US 5792857	A	19980811	US 1996-773001	19961223
AU 9712303	A	19970807	AU 1997-12303	19970123
AU 707604	B2	19990715		
ZA 9700689	A	19970730	ZA 1997-689	19970128
JP 09208603	A	19970812	JP 1997-15751	19970129
JP 4063909	B2	20080319		
HU 9700280	A2	19971229	HU 1997-280	19970129
HU 9700280	A3	20010129		
HU 222055	B1	20030428		

PRIORITY APPLN. INFO.: FR 1996-1073 A 19960130
OTHER SOURCE(S): MARPAT 127:190980
AB Per(3,6-anhydro)-(α-, β-, and γ)- cyclodextrins, substituted at the 2' position with R (R = OH, OR1, SR1, OCOR1NH2, amine, amide, CONH2, CO2R1, OSO2R1, N3; R1 = H, alkyl, aryl, heterocycle) were prepared and used for TLC separation of cations. Thus, hexakis(3,6-anhydro-2-O-acetyl)cyclomaltohexaose was prepared and used for separation of cations, such as K+ and Cs+, by TLC .

L11 ANSWER 29 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:178584 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 124:255037
TITLE: Sensing effects for bioapplications in electroconducting conjugated polymers
AUTHOR(S): Bidan, Gerard; Gadelle, Andree; Teoule, Robert; Vieil, Eric
CORPORATE SOURCE: Departement de Recherche Fondamentale sur la Matiere Condensee, Centre d'Etudes Nucleaires de Grenoble, Grenoble, F-38054, Fr.
SOURCE: Sensors and Materials (1996), 8(3), 179-84
CODEN: SENMER; ISSN: 0914-4935
PUBLISHER: Scientific Publishing Division of MYU K.K.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Straightforward and easy electrodeposition of electroconducting conjugated polymers (ECPs) and their functionalization either by entrapment of anions or by covalent grafting make these materials attractive candidates for fabrication of a sensitive layer at the surface of an electrode. This approach is exemplified in a NO2--sensitive poly(N-methylpyrrole) layer, single-stranded DNA-derivatized polypyrrole film and a reservoir electrode based on a polypyrrole with host β- cyclodextrins.

L11 ANSWER 30 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:921924 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 123:322100
TITLE: Method for solubilizing antitumor agents from the taxol family in an aqueous medium, and branched cyclodextrins therefor
INVENTOR(S): Defaye, Jacques; Perli, Bruno; Gadelle, Andree ; Descamps, Valerie; Coste, Sarguet Annie
PATENT ASSIGNEE(S): Commissariat a l'Energie Atomique, Fr.; Centre National de la Recherche Scientifique
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9519994	A1	19950727	WO 1995-FR75	19950124
W: JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
FR 2715307	A1	19950728	FR 1994-778	19940125
FR 2715307	B1	19960405		

PRIORITY APPLN. INFO.: FR 1994-778 A 19940125
OTHER SOURCE(S): MARPAT 123:322100
AB According to the method, the antitumor agents of the taxol family were

solubilized by combining them with a branched cyclodextrin (I; n = 6-8; R1 = OH, SR2; R2 = α-maltosyl, β-maltosyl group).

L11 ANSWER 31 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:694615 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 124:9153
TITLE: Inclusion and solubilization properties of 6-S-glycosyl-6-thio derivatives of β-cyclodextrin
AUTHOR(S): Laine, Valerie; Coste-Sarguet, Annie; Gadelle, Andree; Defaye, Jacques; Perly, Bruno; Djedaini-Pilard, Florence
CORPORATE SOURCE: CNRS, Centre d'Etudes de Grenoble, Grenoble, F-38054, Fr.
SOURCE: Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1995), (7), 1479-87
CODEN: JCPKBH; ISSN: 0300-9580
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 124:9153
AB The synthesis and physico-chemical properties of branched β-cyclodextrins substituted by one or seven thioglycoside units at the primary hydroxy side are described. The solubilities in water of these compds. are strongly increased compared with the parent β-cyclodextrin although large differences are found between α- and β-anomers, the former exhibiting the larger solubility The inclusion capacity of the these derivs. has been investigated using NMR spectroscopy as the major anal. technique for various host-guest pairs. The apparent discrepancies between the intrinsic solubilities of these host mols. and their ability to solubilize hydrophobic hosts can be explained from geometrical considerations derived from detailed NMR studies. The resp. roles of the side of inclusion, of steric effects and of stabilizing interactions are evidenced and allow an a priori selection of the optimal host derivative for a given guest mol.

L11 ANSWER 32 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:421701 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 122:222708
TITLE: Incorporation of sulfonated cyclodextrins into polypyrrole: an approach for the electro-controlled delivering of neutral drugs
AUTHOR(S): Bidan, G.; Lopez, C.; Mendes-Viegas, F.; Vieil, E.; Gadelle, A.
CORPORATE SOURCE: Lab. Electrochimie Moleculaire, Centre Etudes Nucleaires Grenoble, Grenoble, 38054, Fr.
SOURCE: Biosensors & Bioelectronics (1995), 10(1/2), 219-29
CODEN: BBIOE4; ISSN: 0956-5663
PUBLISHER: Elsevier Advanced Technology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The electro-controlled delivery of drugs based on the doping-dedoping mechanism of Electro-Conducting Polymers is restricted to charged substances acting as dopants. In order to overcome this limitation, this study presents an approach where the trapping/delivering is based on host-guest interaction. As an example of a neutral guest, the mol. N-methylphenothiazine (NMP) is encapsulated in the host, heptasulfonated β- cyclodextrin (β-CDSO3-), which is tailor-made to dope polypyrrole (PPy). The original synthetic method for β-CDSO3- is based on sulfonation of the periodated β-CD in the phase transfer medium. As a consequence of their size and of their multicharged character, β-CDSO3-s are fixed dopants. The stability of the β-CDSO3- entrapment is checked by Optical Beam Deflection (mirage effect) measurements. The ionic movements associated with the switching of the β-CDSO3- doped PPy (PPy+, β-CDSO3-) film appear to be mainly due to cations with this technique. Cyclic voltammetry expts. confirm the entrapment of neutral NMP by simply dipping the PPY+, β-CDSO3- film in a CH3CN solution containing NMP. Repeated electrochem. cycling of such a reservoir electrode indicates the progressive elimination of NMP from the (PPy+, β-CDSO3- [NMP]) film.

L11 ANSWER 33 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:316135 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 122:94365
TITLE: Conductive polymer doped with sulfonated cyclodextrin salt and device for capturing and/or delivering an active substance using this polymer.
INVENTOR(S): Vieil, Eric; Bidan, Gerard; Gadelle, Andree; Mendes, Viegas Maria-Fatima
PATENT ASSIGNEE(S): Commissariat a l'Energie Atomique, Fr.
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 627747	A1	19941207	EP 1994-401204	19940601
R: CH, DE, FR, GB, IT, LI				
FR 2706067	A1	19941209	FR 1993-6655	19930603
FR 2706067	B1	19950707		
US 5480924	A	19960102	US 1994-246125	19940519
JP 07011149	A	19950113	JP 1994-122727	19940603
US 5587466	A	19961224	US 1995-539437	19951005
PRIORITY APPLN. INFO.:			FR 1993-6655 A	19930603
			US 1994-246125 A3	19940519

OTHER SOURCE(S): MARPAT 122:94365
AB In a conductive polymer doped by a sulfonated cyclodextrin salt and a device for capturing and/or delivering an active substance using this polymer, the dopant has formula I, in which n is 2-50, M+ is Na+, Li+, K+, Mg+1/2 or NH4+ and R is -SO3M+ or -OH, R being different from the ring of the other. The doped conductive polymer can be used as the active electrode in an electrochem. device.

L11 ANSWER 34 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:253021 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 122:187960
TITLE: Synthesis of cyclohexakis- and cycloheptakis-(1→4)-(7-amino-6,7-dideoxy-α-D-gluco-heptopyranosyl), homoanalogues of 6-amino-6-deoxy-cyclomaltooligosaccharides
AUTHOR(S): Defaye, Jacques; Gadelle, Andree
CORPORATE SOURCE: CNRS and CEA, Departement de Recherche Fondamentale sur la Matiere Condensee/SESAM, Centre d'Etudes de Grenoble, Grenoble, F-38054, Fr.
SOURCE: Carbohydrate Research (1994), 265(1), 129-32
CODEN: CRBRAT; ISSN: 0008-6215
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 122:187960
AB Aminodideoxycyclodextrins I (n = 6, 7) were prepared from iododeoxycylodextrins via cyanation and reduction

L11 ANSWER 35 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1994:157132 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 120:157132
TITLE: Nuclear magnetic resonance study of a polar headgroup determined α- cyclodextrin-phospholipid association
AUTHOR(S): Fauvelle, F.; Debouzy, J. C.; Nardin, R.; Gadelle, A.
CORPORATE SOURCE: Unite de Biophysique, CRSSA, La Tronche-Grenoble, Fr.
SOURCE: Bioelectrochemistry and Bioenergetics (1994), 33(1), 95-9
CODEN: BEBEBP; ISSN: 0302-4598
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In order to investigate the hemolytic activity of α-cyclodextrin, the interactions of this cyclic oligosaccharide with selected membrane phospholipids were studied by 1H-NMR and 31P-NMR. Two

natural phospholipids differing by their polar headgroup, phosphatidylcholine and phosphatidylinositol, were tested. The results suggest that interactions of α- cyclodextrin with phospholipids are at least modulated by the nature of the polar headgroup in a first step. The acyl chains could be implicated in a second step.

L11 ANSWER 36 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1991:82321 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 114:82321
TITLE: Selective halogenation of cyclic maltose oligosaccharides in the C-6 position and synthesis of per(3,6-anhydro) cyclic maltose oligosaccharides
AUTHOR(S): Gadelle, Andree; Defaye, Jaques
CORPORATE SOURCE: Dep. Rech. Fondam., Cent. Etud. Nucl. Grenoble, Grenoble, F-38041, Fr.
SOURCE: Angewandte Chemie (1991), 103(1), 94-5 (See also Angew. Chem., Int. Ed. Engl., 1991, 30(1), 78-80)
CODEN: ANCEAD; ISSN: 0044-8249
DOCUMENT TYPE: Journal
LANGUAGE: German
AB Cyclic maltose oligosaccharides were treated with PPh3 and iodine (or bromine) to give the per-6-deoxy-6-halo derivs. Treatment of per(6-deoxy-6-iodo) cyclic maltose oligosaccharide with aqueous NaOH gave the per(3,6-anhydro) derivs.

L11 ANSWER 37 OF 37 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1990:179645 CAPLUS <<LOGINID::20080328>>
DOCUMENT NUMBER: 112:179645
TITLE: Stereoselective thioglycoside synthesis. Part X. Branched thiocyclomalto-oligosaccharides: synthesis and properties of 6-S-α- and 6-S-β-D-glucopyranosyl-6-thiocyclomaltoheptaose
AUTHOR(S): Defaye, Jacques; Gadelle, Andree; Guiller, Alain; Darcy, Raphael; O'Sullivan, Thomas
CORPORATE SOURCE: Dep. Rech. Fondam., Cent. Etud. Nucl., Grenoble, F-38041, Fr.
SOURCE: Carbohydrate Research (1989), 192, 251-8
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 112:179645
AB 6-S-α- (I) And 6-S-β-D-glucopyranoysl-6-thiocyclomaltoheptaose (II) have been prepared by treatment of 6-O-p-tolylsulfonylcyclomaltoheptaose with the sodium salts of 1-thio-α- and -β-D-glucopyranose, resp., in 1,3-dimethyl-2-oxohexahydropyrimidine. Compds. I and II are more soluble in water than cyclomaltoheptaose and enhance the solubility of hydrophobic compds. by inclusion.